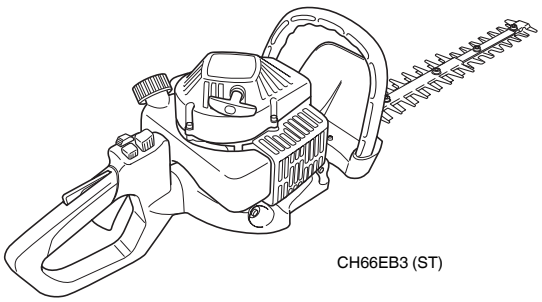
HITACHI

Hedge Trimmer
Model CH 50EA3 (ST)/CH 55EB3 (ST)
CH 62EA3 (ST)/CH 66EB3 (ST)
CH 78EC3 (ST)

Handling instructions



CH66EB3 (ST)

Note:
Before using this machine, carefully read through these HANDLING INSTRUCTIONS to ensure efficient, safe operation. It is recommended that these INSTRUCTIONS be kept readily available as an important reference when using this machine.

Hitachi Koki

970-83301-200 2009.12

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MEANINGS OF SYMBOLS

NOTE: Some units do not carry them.

	Symbols ⚠ **WARNING** The following show symbols used for the machine. Be sure that you understand their meaning before use.
	It is important that you read, fully understand and observe the following safety precautions and warnings. Careless or improper use of the unit may cause serious or fatal injury.
	Read, understand and follow all warnings and instructions in this manual and on the unit.
	Always wear eye, head and ear protectors when using this unit.
	Before using your machine • Read the manual carefully. • Check that the cutting equipment is correctly assembled and adjusted. • Start the unit and check the carburetor adjustment. See “MAINTENANCE”.

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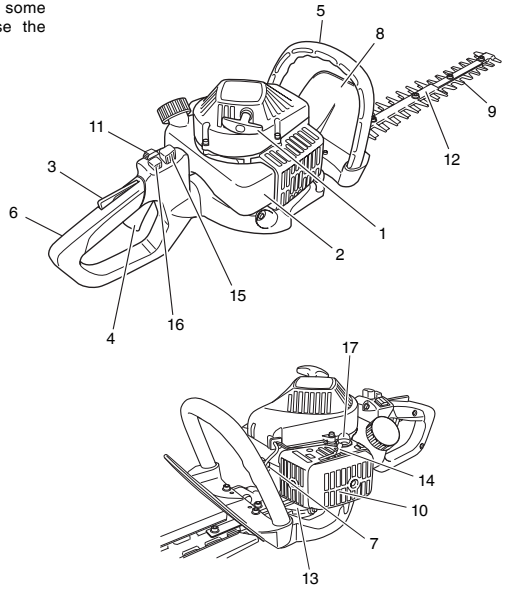
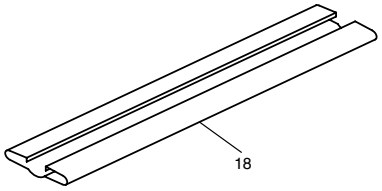
WHAT IS WHAT?

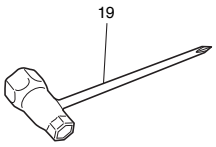
Since this manual covers several models, there may be some difference between these illustrations and your unit. Use the instructions that apply to your unit.

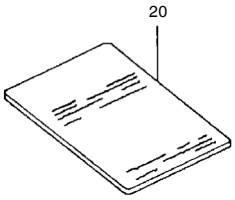
1. Recoil starter
2. Fuel tank
3. Throttle trigger lookout
4. Throttle trigger
5. Front handle
6. Rear handle
7. Spark plug
8. Hand guard
9. Cutting blade
10. Air cleaner
11. Ignition switch
12. Blunt guard
13. Gear case
14. Choke lever
15. Lock lever
16. Release lever
17. Priming pump
18. Blade cover
19. Combi box spanner
20. Handling instructions



CH55EB3 (ST), CH66EB3 (ST)
CH50EA3 (ST), CH62EA3 (ST)
CH78EC3 (ST)







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WARNINGS AND SAFETY INSTRUCTIONS

Operator safety

- Always wear a safety face shield or goggles.
- Always wear heavy, long pants, boots and gloves. Do not wear loose clothing, jewelry, short pants, sandals or go barefoot. Secure hair so it is above shoulder length.
- Do not operate this tool when you are tired, ill or under the influence of alcohol, drugs or medication.
- Never let a child or inexperienced person operate the machine.
- Wear hearing protection.
- Never start or run the engine inside a closed room or building. Breathing exhaust fumes can kill.
- Keep handles free of oil and fuel.
- Keep hands away from cutting equipment.
- Do not grab or hold the unit by the cutting equipment.
- When the unit is turned off, make sure the cutting attachment has stopped before the unit is set down.
- When operation is prolonged, take a break from time to time so that you may avoid possible Hand-Arm Vibration Syndrome (HAVS) which is caused by vibration.

⚠ **WARNING**

- Antivibration systems do not guarantee that you will not sustain Hand-Arm Vibration Syndrome or carpal tunnel syndrome. Therefore, continual and regular users should monitor closely the condition of their hands and fingers. If any symptoms of the above appear, seek medical advice immediately.
- If you are using any medical electric/electronic devices such as a pacemaker, consult your physician as well as the device manufacturer prior to operating any power equipment.

Unit/machine safety

- Inspect the entire unit/machine before each use. Replace damaged parts. Check for fuel leaks and make sure all fasteners are in place and securely tightened.
- Replace parts that are cracked, chipped or damaged in any way before using the unit/machine.
- Make sure the safety guard is properly attached.
- Keep others away when making carburetor adjustments.
- Use only accessories as recommended for this unit/machine by the manufacturer.

⚠ **WARNING**

Never modify the unit/machine in any way. Do not use your unit/machine for any job except that for which it is intended.

Fuel safety

- Mix and pour fuel outdoors and where there are no sparks or flames.
- Use a container approved for fuel.
- Do not smoke or allow smoking near fuel or the unit/machine or while using the unit/machine.
- Wipe up all fuel spills before starting engine.
- Move at least 3 m away from fueling site before starting engine.
- Stop engine before removing fuel cap.
- Empty the fuel tank before storing the unit/machine. It is recommended that the fuel be emptied after each use. If fuel is left in the tank, store so fuel will not leak.
- Store unit/machine and fuel in area where fuel vapors cannot reach sparks or open flames from water heaters, electric motors or switches, furnaces, etc.

⚠ **WARNING**

Fuel is easy to ignite or get explosion or inhale fumes, so that pay special attention when handling or filling fuel.

Cutting safety

- Do not cut any material other than plant hedge.
- Inspect the area to be cut before each use. Remove objects which can be thrown or become entangled.
- For respiratory protection, wear an aerosol protection mask when cutting the grass after insecticide is scattered.
- Keep others including children, animals, bystanders and helpers outside the 15 m hazard zone. Stop the engine immediately if you are approached.
- Hold the unit/machine firmly with both hands.
- Keep firm footing and balance. Do not over-reach.
- Keep all parts of your body away from the muffler and cutting attachment when the engine is running.
- Keep cutting tool below shoulder level. NEVER operate unit from a ladder, while in a tree or from any unstable support.
- When relocating to a new work area, be sure to shut off the machine and ensure that all cutting attachments are stopped.
- Never place the machine on the ground when running.
- Always carry a first-aid kit when operating any power equipment.
- Never start or run the engine inside a closed room or building and/or near the inflammable liquid. Breathing exhaust fumes can kill.

Maintenance safety

- Maintain the unit/machine according to recommended procedures.
- Disconnect the spark plug before performing maintenance except for carburetor adjustments.
- Keep others away when making carburetor adjustments.
- Use only genuine Hitachi replacement parts as recommended by the manufacturer.

Transport and storage

- Carry the unit/machine by hand with the engine stopped and the muffler away from your body.
- Allow the engine to cool, empty the fuel tank, and secure the unit/machine before storing or transporting in a vehicle.
- Empty the fuel tank before storing the unit/machine. It is recommended that the fuel be emptied after each use. If fuel is left in the tank, store so fuel will not leak.
- Store unit/machine out of the reach of children.
- Clean and maintenance the unit carefully and store it in a dry place.
- Make sure engine switch is off when transporting or storing.
- When transporting in a vehicle or storage, cover blade with blade cover.

If situations occur which are not covered in this manual, take care and use common sense. Contact your Hitachi dealer if you need assistance. Pay special attention to statements preceded by the following words:

⚠ **WARNING**

Indicates a strong possibility of severe personal injury or loss of life, if instructions are not followed.

CAUTION

Indicates a possibility of personal injury or equipment damage, if instructions are not followed.

NOTE

Helpful information for correct function and use.

CAUTION

Do not disassemble the recoil starter. you may get a possibility of personal injury with recoil spring.

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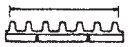
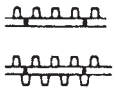
SPECIFICATIONS

MODEL	CH66EB3 (ST)/CH55EB3 (ST) CH50EA3 (ST)/CH62EA3 (ST)	CH78EC3 (ST)
Engine Size (ml)	21.1	23.9
Spark Plug	NGK BPMR-6A	NGK BPMR-6A
Fuel Tank Capacity (l)	0.35	0.35
Dry Weight (kg)	CH55EB3 (ST)..... 4.7 CH66EB3 (ST)..... 5.1 CH50EA3 (ST)..... 4.3 CH62EA3 (ST)..... 4.5	5.4
 Overall cutter length (mm)	CH50EA3 (ST) ..... 500 CH66EB3 (ST)..... 650 CH55EB3 (ST)..... 550 CH62EA3 (ST)..... 620	770
 :○ Blade type :△	△	△
Sound pressure level LpA (dB(A)) (ISO 10517)	CH66EB3 (ST)..... 81 CH55EB3 (ST)..... 85 CH50EA3 (ST)/CH62EA3 (ST)..... 89	83
Sound power level Lw measured (dB (A))	ISO 10517 2000/14/EC CH66EB3 (ST).....99 100 CH55EB3 (ST).....103 103 CH50EA3 (ST).....107 107 CH62EA3 (ST).....107 108	ISO 10517 2000/14/EC 101 102
LwA (dB (A))	110	110
Vibration level (m/s²) (ISO 10517) Front handle	CH66EB3 (ST)..... 8.8 CH55EB3 (ST)..... 8.0 CH50EA3 (ST)..... 7.1 CH62EA3 (ST)..... 8.3	7.6
Rear handle	CH66EB3 (ST)..... 11.1 CH55EB3 (ST)..... 9.7 CH50EA3 (ST)..... 11.0 CH62EA3 (ST)..... 10.8	12.4

NOTE

Equivalent noise level/vibration level are calculated as the time-weighted energy total for noise/vibration levels under various working conditions with the following time distribution : ISO 10517.....1/5 idle, 4/5 racing. 2000/14/EC.....only racing.

* All data subject to change without notice.

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OPERATING PROCEDURES

Fuel (Fig. 1)

⚠ **WARNING**
The hedge trimmer is equipped with a two- stroke engine. Always run the engine on fuel, mixed with oil.
Provide good ventilation, when fueling or handling fuel.

Fuel
- ○ Always use branded 89 octane unleaded gasoline.
- ○ Use genuine two-cycle oil or use a mix between 25:1 to 50:1, please consult the oil bottle for the ratio or Hitachi dealer.
- ○ If genuine oil is not available, use an anti-oxidant added quality oil expressly labeled for air-cooled 2-cycle engine use (JASO FC GRADE OIL or ISO EGC GRADE). Do not use BIA or TCW (2-stroke water-cooling type) mixed oil.
- ○ Never use multi-grade oil (10W/30) or waste oil.
- ○ Always mix fuel and oil in a separate clean container.

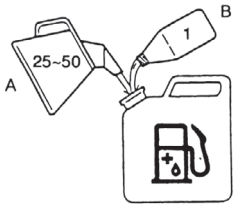

Fig. 1

Always start by filling half the amount of fuel, which is to be used. Then add the whole amount of oil. Mix (shake) the fuel mixture. Add the remaining amount of fuel.
Mix (shake) the fuel-mix thoroughly before filling the fuel tank.

Fueling

⚠ **WARNING (Fig. 2)**
- ○ Always shut off the engine before refueling.
- ○ Slowly open the fuel tank (1), when filling up with fuel, so that possible over-pressure disappears.
- ○ Tighten the fuel cap carefully, after fueling.
- ○ Always move the unit at least 3 m from the fueling area before starting.

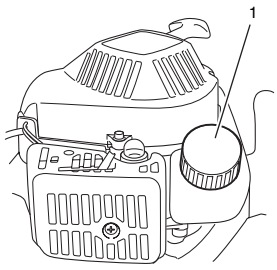

Fig. 2

Before fueling, clean the tank cap area carefully, to ensure that no dirt falls into the tank. Make sure that the fuel is well mixed by shaking the container, before fueling.

Starting

CAUTION
Before starting, make sure the cutting attachment does not touch anything.

1. Set ignition switch (2) to ON position (A). (**Fig. 3**)
   * Push priming bulb (4) several times so that fuel flows through the bulb or return pipe. (If so equipped) (**Fig. 4**)

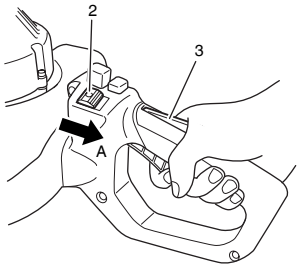

Fig. 3

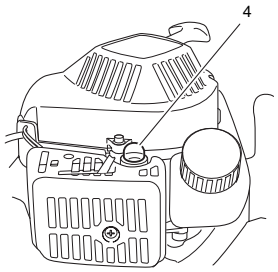

Fig. 4

2. With the throttle trigger lockout (3) pressed, pull throttle trigger, then slowly release throttle the trigger first, then the throttle trigger lockout. This will lock the throttle in starting position. (**Fig. 3**)
3. Set choke lever (5) to CLOSED position (B). (**Fig. 5**)

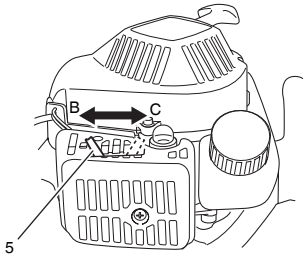

Fig. 5

4. Pull recoil starter briskly, taking care to keep the handle in your grasp and not allowing it to snap back. (**Fig. 6**)

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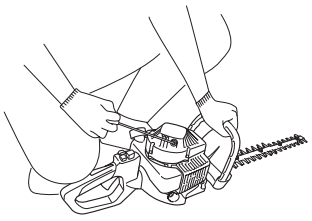

Fig. 6

5. When you hear the engine attempts to start, return choke lever to RUN position (open) (C). Then pull recoil starter briskly again.

NOTE

If engine does not start, repeat procedures from 2 to 4.

6. After starting engine, allow the engine about 2-3 minutes to warm up before subjecting it to any load.

Cutting

When cutting, operate engine at full throttle as this maintains proper cutter speed. When trimming top of hedge, hold trimmer so blades are between 15 and 30 degrees from a horizontal position and swing trimmer in an arc toward edge of hedge to sweep cuttings off. When trimming sides of hedge, hold blade vertically and swing unit in an arc.

NOTE

- **Multi-position twist handle (Fig. 7)**
  The rear control handle turns 90 degrees to provide comfortable use while accommodating a variety of cutting angles. The handle allows for five different locking positions. Before attempting to adjust rear handle, make sure the machine is at idle or engine is shut off.
- The machine will automatically shut off if the throttle lever is pressed while the handle is NOT secured in one of the five preset positions. Never attempt to operate the machine unless the rear handle is properly locked in place.
  To rotate the handle; push the lock lever (6) allowing the handle to turn. Press the lock lever (6) to release the lock and allow the handle to turn. Rotate the handle to the desired 0°, 45° or 90° locking position and press the release lever (7) to lock the handle in place.
  D: LOCK
  E: UNLOCK

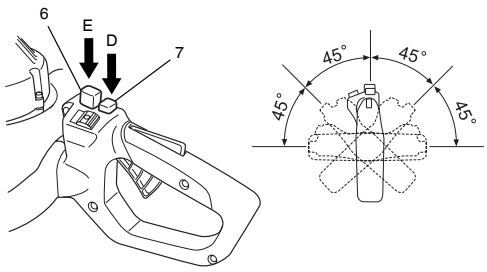

Fig. 7

Stopping (Fig. 8)

Decrease engine speed, and push ignition switch to stop position (F).

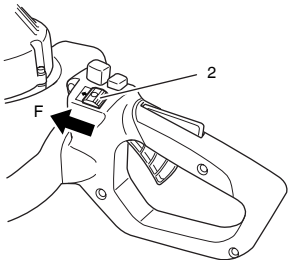

Fig. 8

MAINTENANCE

MAINTENANCE, REPLACEMENT OR REPAIR OF THE EMISSION CONTROL DEVICES AND SYSTEM MAY BE PERFORMED BY ANY NONROAD ENGINE REPAIR ESTABLISHMENT OR INDIVIDUAL.

Carburetor adjustment (Fig. 9)

⚠ **WARNING**

- The cutting attachment may be spinning during carburetor adjustments.
- Never start the engine without the complete clutch cover. Otherwise the clutch can come loose and cause personal injuries.

In the carburetor, fuel is mixed with air. When the engine is test run at the factory, the carburetor is adjusted. A further adjustment may be required, according to climate and altitude. The carburetor has one adjustment possibility:

T = Idle speed adjustment screw.

Idle speed adjustment (T)

Check that the air filter is clean. When the idle speed is correct, the cutting attachment will not rotate. If adjustment is required, close (clockwise) the T-screw, with the engine running, until the cutting attachment starts to rotate. Open (counter-clockwise) the screw until the cutting attachment stops. You have reached the correct idle speed when the engine runs smoothly in all positions well below the rpm when the cutting attachment starts to rotate.

If the cutting attachment still rotates after idle speed adjustment, contact Hitachi dealer.

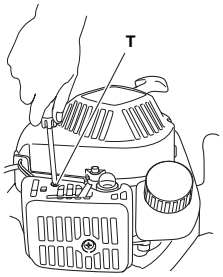

Fig. 9

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Air filter (Fig. 10)
The air filter must be cleaned from dust and dirt in order to avoid:
- ○ Carburetor malfunctions.
- ○ Starting problems.
- ○ Engine power reduction.
- ○ Unnecessary wear on the engine parts.
- ○ Abnormal fuel consumption.

Clean the air filter daily or more often if working in exceptionally dusty areas.

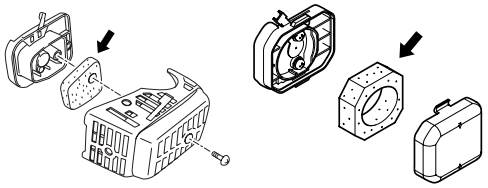

Fig. 10

Cleaning the air filter
Remove the air filter cover and the filter. Rinse it in warm soap suds. Check that the filter is dry before reassembly. An air filter that has been used for some time cannot be cleaned completely. Therefore, it must regularly be replaced by a new one. A damaged filter must always be replaced.

NOTE
Saturate the element in 2-cycle oil or the equivalent. Squeeze the element to distribute the oil completely and to remove any excess oil.

Spark plug (Fig. 11)
The spark plug condition is influenced by:
- ○ An incorrect carburetor setting.
- ○ Wrong fuel mixture (too much oil in the gasoline).
- ○ A dirty air filter.
- ○ Hard running conditions (such as cold weather).

These factors cause deposits on the spark plug electrodes, which may result in malfunction and starting difficulties. If the engine is low on power, difficult to start or runs poorly at idling speed, always check the spark plug first. If the spark plug is dirty, clean it and check the electrode gap. Readjust if necessary. The correct gap is 0.6 mm. The spark plug should be replaced after about 100 operation hours or earlier if the electrodes are badly eroded.

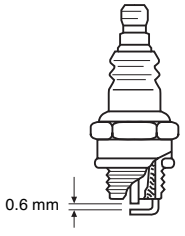

Fig. 11

NOTE
In some areas, local law requires using a resistor spark plug to suppress ignition signals. If this machine was originally equipped with resistor spark plug, use the same type of spark plug for replacement.

Cutter blade (Fig. 12, 13)
The blades are installed to the cutter guide with the four or five bolts. Those bolts are tightened with a clearance so that the cutters can move smoothly.

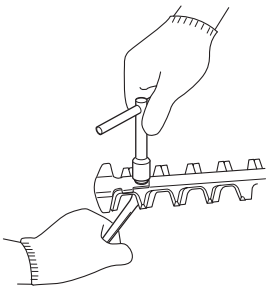

Fig. 12

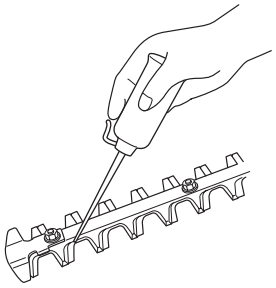

Fig. 13

When clearance is too small
The cutters do not move properly and the sliding surfaces may seize.

When clearance is too large
The cutters are poor in sharpness.

To adjust the cutter clearance
1. Loosen the cutter fixing nuts.
2. Fully tighten the cutter fixing bolts and then loosen them approx. 1/2 turn.
3. With the bolts set at that position, tighten the cutter fixing nuts.

Be sure to replace cutter guide fixing bolts when they are loosened, worn or damaged. Also be sure to replace damaged cutter blade.

NOTE
Properly lubricate the cutter sliding surfaces with machine oil.

Gear case (Fig. 14)
Apply a good quality lithium based grease through the grease fitting until a small amount comes out between the cutter blades and the gear case.

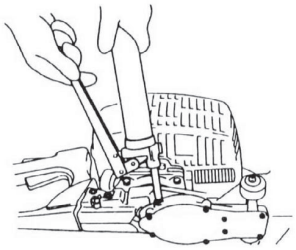

Fig. 14

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NOTE

Lubrication should be applied at 20 hour intervals and more frequently with heavy use.

Fuel filter (Fig. 15)

Remove the fuel filter from the fuel tank and thoroughly wash it in solvent. After that, push the filter into the tank completely.

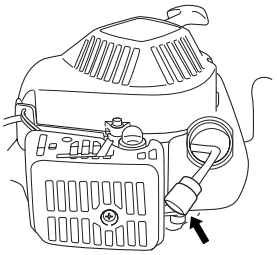

Fig. 15

NOTE

If the filter is hard due to dust and dirt, replace it.

Cleaning the cylinder fins (Fig. 16)

When leaves get caught between cylinder fins (8), the engine may overheat, resulting in lower output. To avoid this, always keep cylinder fins and fan case clean.

Every 100 operating hours, or once a year (more often if conditions require), clean fins and external surfaces of engine of dust, dirt and oil deposits which can contribute to improper cooling.

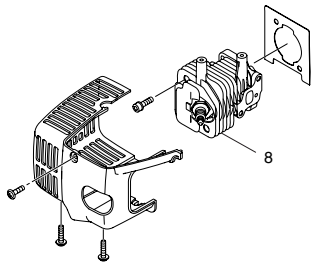

Fig. 16

Cleaning the muffler (Fig. 17)

Remove the muffler and spark arrestor (if so equipped), and clean out any excess carbon from the exhaust port or muffler inlet every 100 hours of operation.

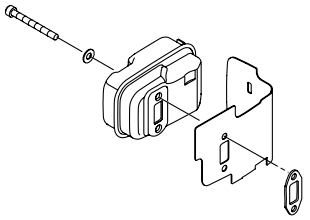

Fig. 17

For long-term storage

Drain all fuel from the fuel tank. Start and let engine run until it stops. Repair any damage which has resulted from use. Clean the unit with a clean rag, or high pressure air hose. Put a few drops of two-cycle engine oil into the cylinder through the spark plug hole, and spin the engine over several times to distribute oil. Cover the unit and store it in a dry area.

Maintenance schedule

Below you will find some general maintenance instructions. For further information please contact your Hitachi dealer.

Daily maintenance

- ○ Clean the exterior of the hedge trimmer.
- ○ Check the blade guard for damage or cracks. Change the guard in case of impacts or cracks.
- ○ Check that the blade is sharp, and without cracks.
- ○ Check that the blade nut is sufficiently tightened.
- ○ Make sure that the blade transport guard is undamaged and that it can be securely fitted.
- ○ Check that nuts and screws are sufficiently tightened.

Weekly maintenance

- ○ Check the starter, especially cord and return spring.
- ○ Clean the exterior of the spark plug.
- ○ Remove it and check the electrode gap. Adjust it to 0.6 mm, or change the spark plug.
- ○ Clean the cooling fins on the cylinder and check that the air intake at the starter is not clogged.
- ○ Check gear case is filled with grease.
- ○ Clean the air filter.

Monthly maintenance

- ○ Rinse the fuel tank with gasoline.
- ○ Clean the exterior of the carburetor and the space around it.
- ○ Clean the fan and the space around it.

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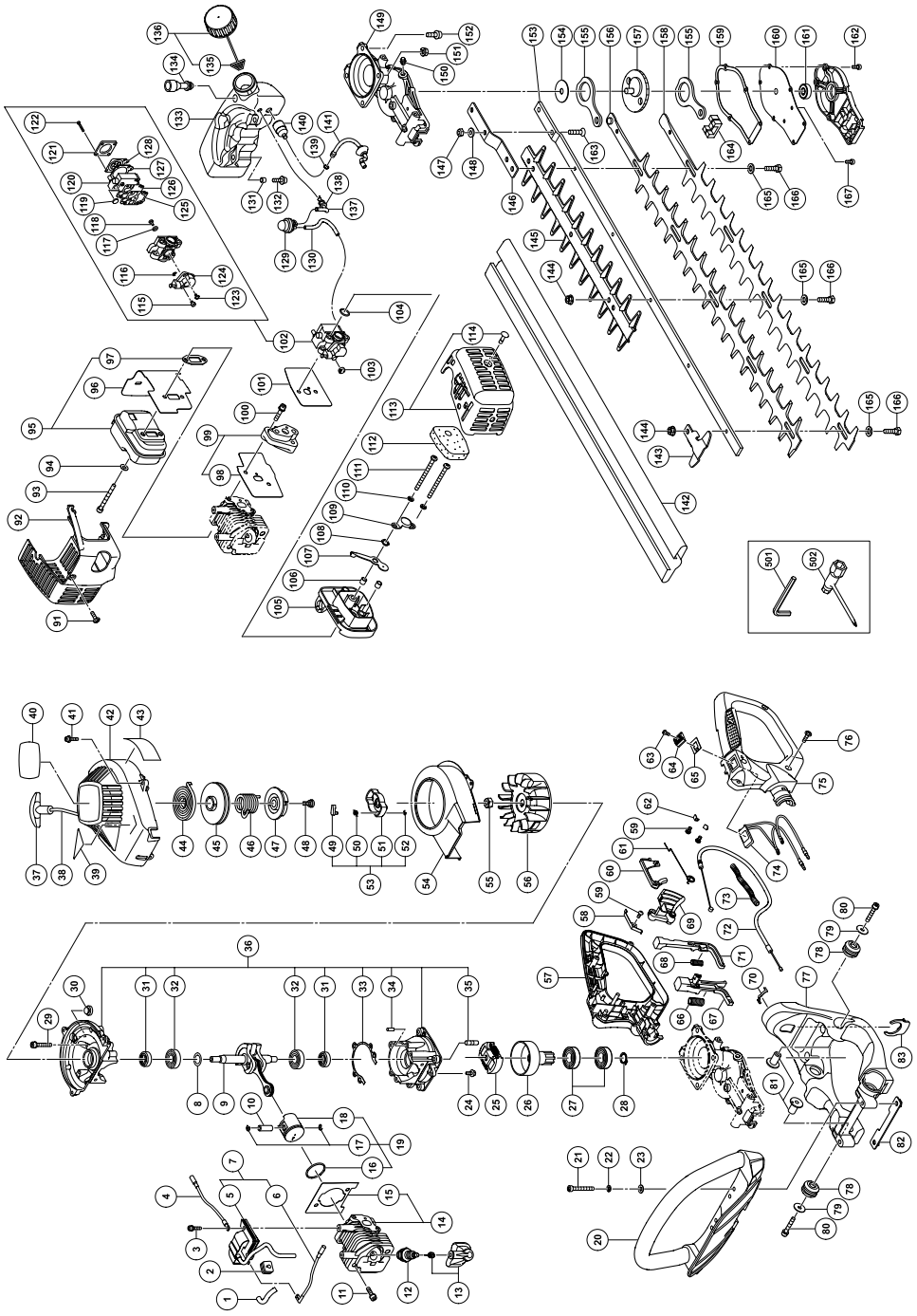

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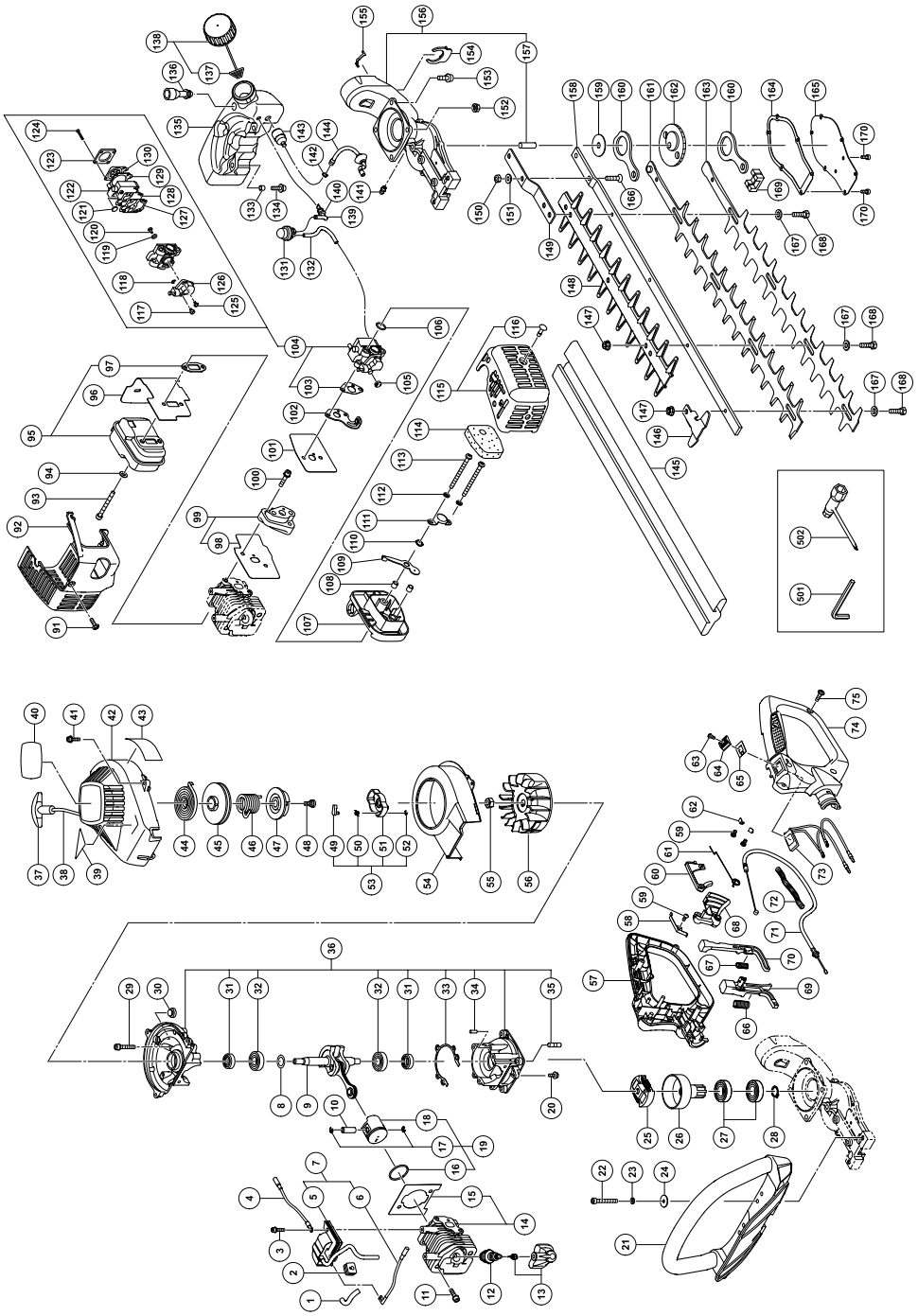

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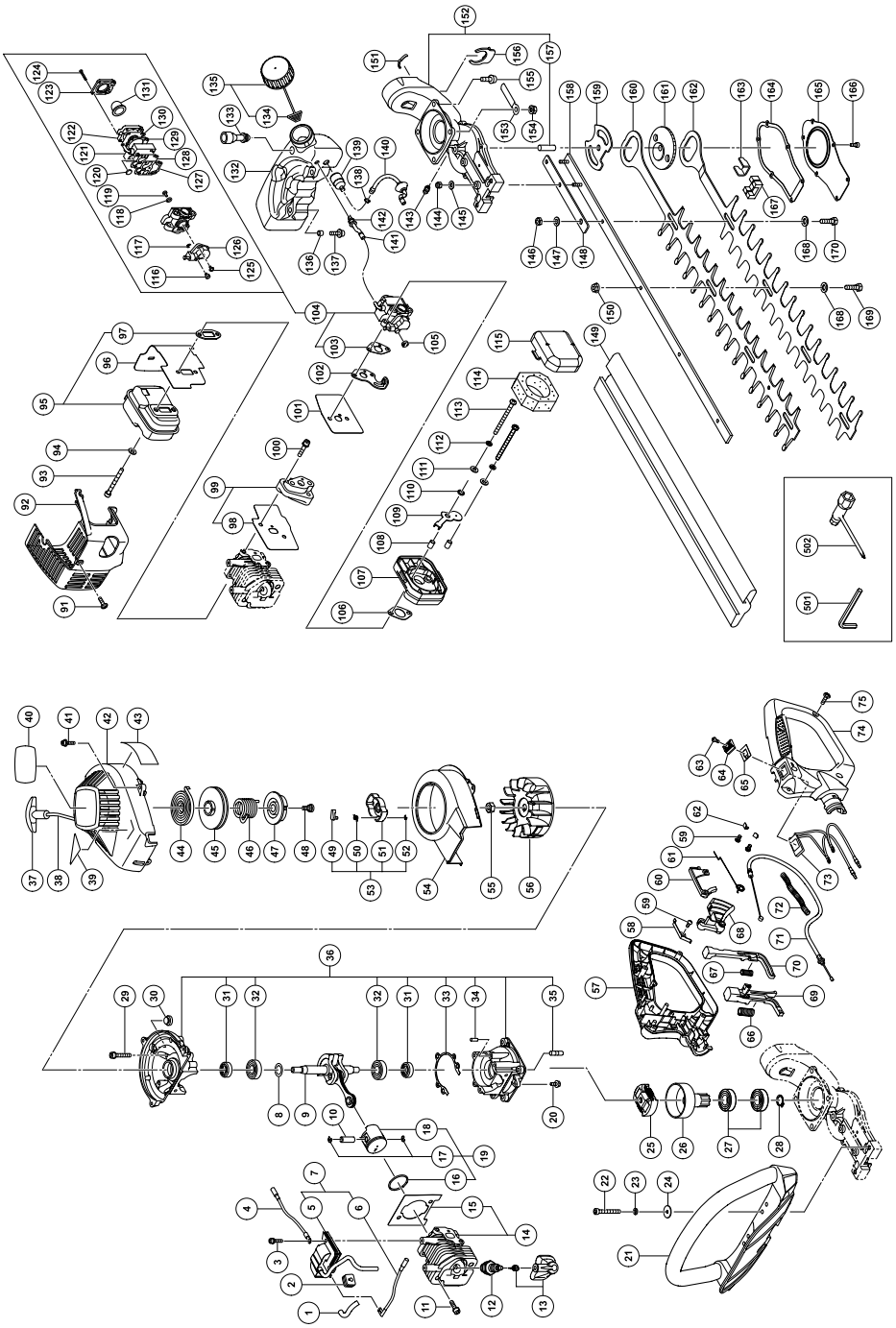

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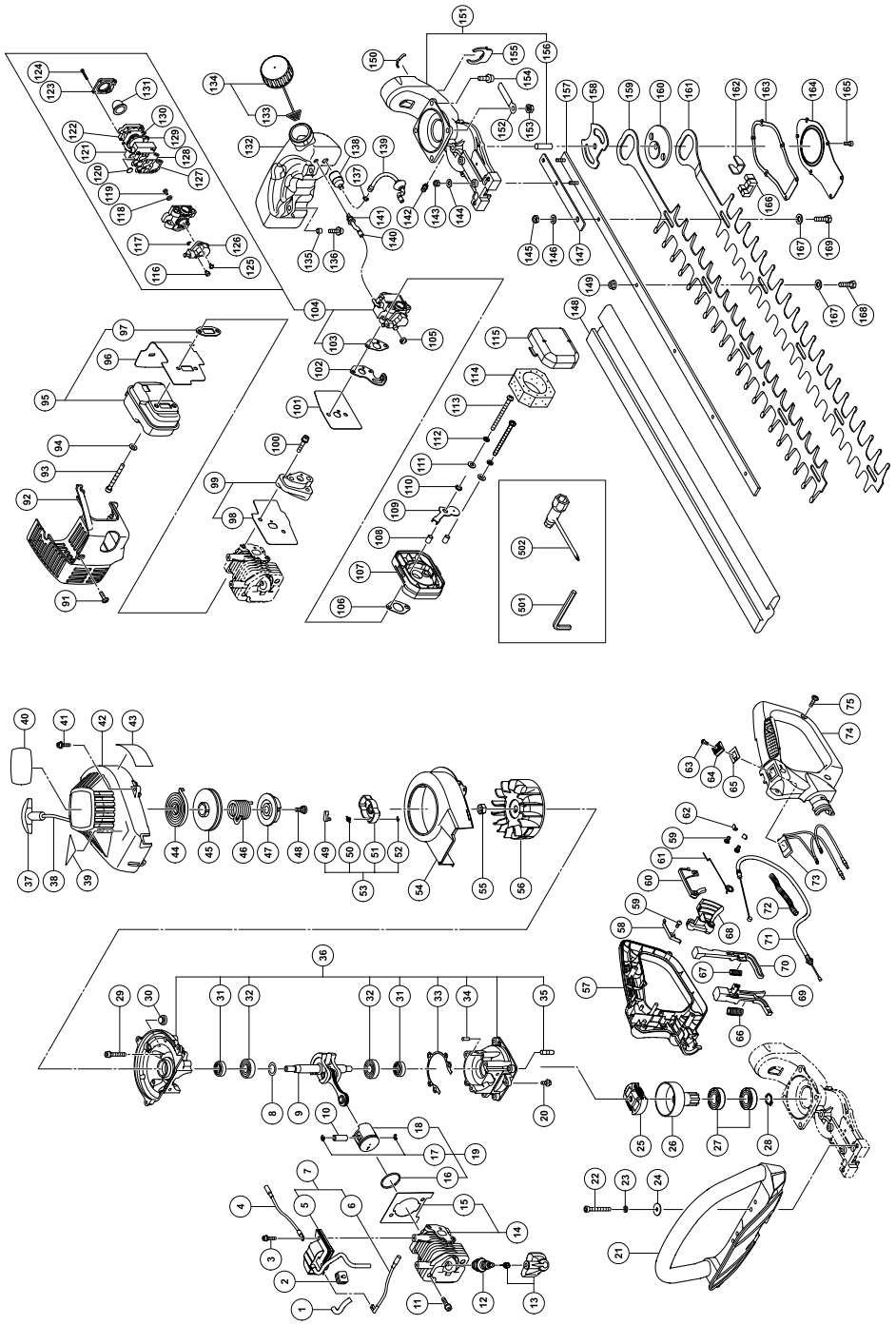

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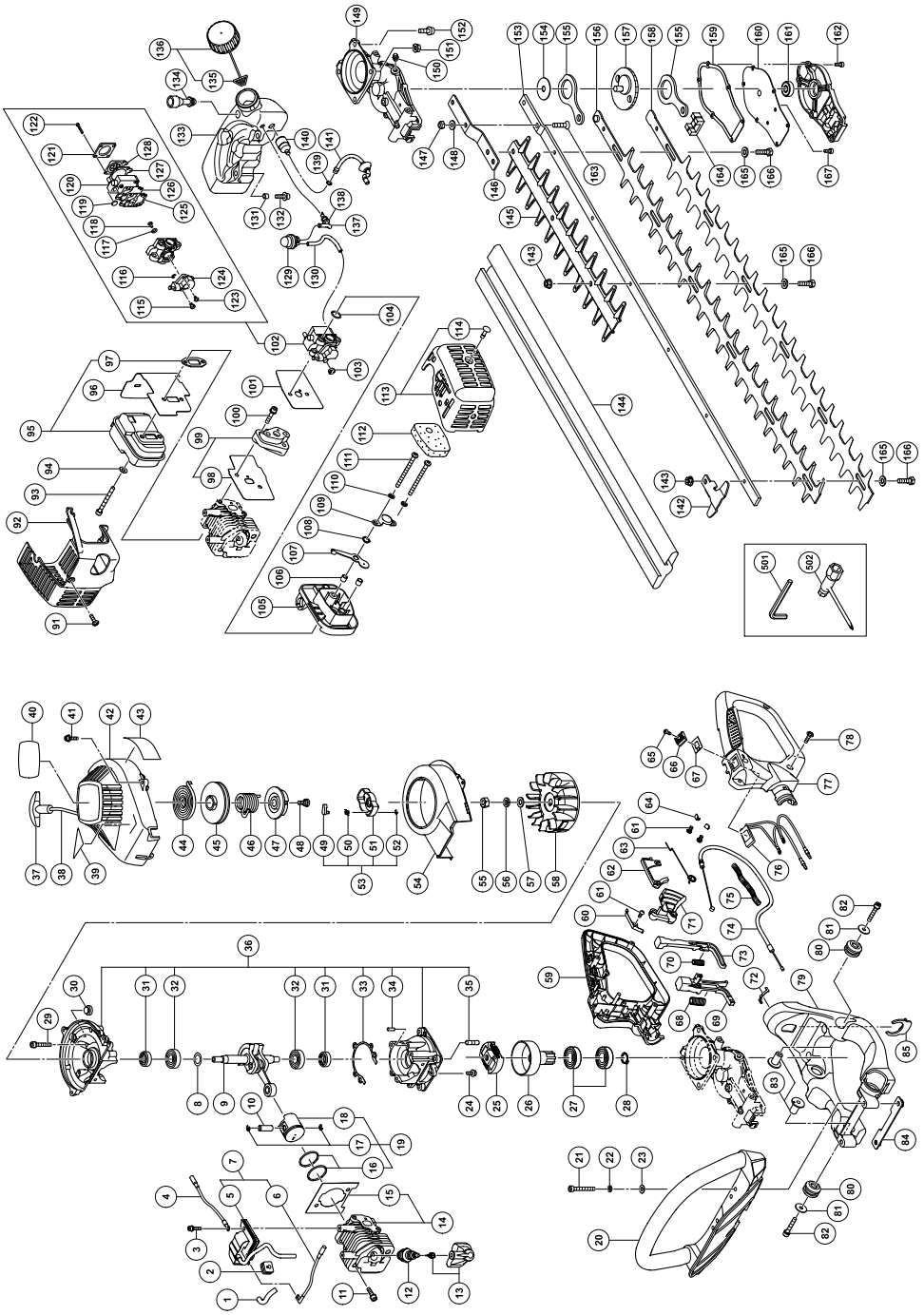

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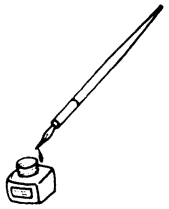

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